



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------------------------------------------------|-------------|----------------------|------------------------------|------------------|
| 10/039,947 | 10/25/2001 | Robert C. Moore | SD6858 | 8459 |
| 20567 | 7590 | 11/16/2004 | | |
| SANDIA CORPORATION P O BOX 5800 MS-0161 ALBUQUERQUE, NM 87185-0161 | | | EXAMINER CINTINS, IVARS C | |
| | | | ART UNIT 1724 | PAPER NUMBER |

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,947

Applicant(s)

MOORE ET AL.

Examiner

Ivars C. Cintins

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-30,32-37,39-43,46-54 and 56-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-22,24,25,27-30,33-37,39-43,46-52,54 and 56-65 is/are allowed.
- 6) ☒ Claim(s) 23,26,32 and 53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 32 is again rejected under 35 U.S.C. 102(b) as being clearly anticipated by the Galbacs et al. publication entitled “Removal of the Arsenic Content of Drinking Water” (see the Summary; paragraphs 1 and 2 of the Discussion; and the Conclusion in this document) or the Galbacs et al. publication entitled “Ammonia Removal From Sewage Waters By Magnesium Salts” (see lines 2-4 of the Abstract; and paragraph 12 of the Experimental section of this document).

Claims 23, 26 and 32 are again rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schuster et al. (U.S. Patent No. 5,114,592). See col. 4, lines 40-42; and col. 7, lines 66-67.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 53 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. The reference discloses the claimed invention with the exception of the use of magnesium oxide. However, since magnesium oxide is known to form magnesium hydroxide when placed in an aqueous solution, it would have been obvious to one of ordinary skill in the art at the time

Art Unit: 1724

the invention was made to employ this compound as the source of magnesium hydroxide in the reference system (see col. 7, line 67).

Applicant's arguments filed August 16, 2004 have been noted and carefully considered but are not deemed to be persuasive of patentability. Applicant argues that claim 23 is not anticipated by either Galbacs et al. publication or by Schuster et al. because none of these references teaches or suggests using magnesium hydroxide disposed on the surface of a carrier particle. Initially, it should be noted that neither Galbacs et al. publication was used to reject claim 23, only Schuster et al. (see page 2 of the Office action dated June 15, 2004). In any event, Schuster et al. discloses an embodiment wherein magnesium hydroxide is used in combination with calcium oxide (see col. 7, lines 66-67), and in this embodiment some of the magnesium hydroxide must inherently be disposed on the surface of the calcium oxide (i.e. carrier particle).

Applicant also argues that claim 32 is not anticipated by either Galbacs et al. publication or by Schuster et al. because none of these references teaches or suggests contacting the magnesium hydroxide with the water undergoing treatment for a period of time "sufficiently short to prevent significant release of the arsenic from the $\text{Mg}(\text{OH})_2$ with adsorbed arsenic ..." as recited in the last 3 lines of claim 32. Again, this argument has been noted and carefully considered, but is not deemed to be persuasive of patentability. It is pointed out that none of the above noted references mentions the release of arsenic from the adsorbent material; and therefore, the contact period employed in these references must be sufficiently short to prevent such arsenic release. In any event, since the term "significant" is highly subjective, whatever amount of arsenic happens to be released in the reference systems could be considered insignificant.

Claims 2-22, 24, 25, 27-30, 33-37, 39-43, 46-52, 54 and 56-65 are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at (571) 272-1166.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Application/Control Number: 10/039,947

Page 5

Art Unit: 1724

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ivars C. Cintins
Primary Examiner
Art Unit 1724

I. Cintins
November 14, 2004